

## ABSTRACT OF THE DISCLOSURE

An apparatus measures a voltage fluctuation waveform in a semiconductor integrated circuit having a large number of wiring layers and being operated on a lower voltage without a destructive inspection. For this propose, the apparatus includes a power-source-system waveform converting circuit, disposed close to a functional circuit and in the LSI and operated on a second rated voltage higher than a first rated voltage, for converting the voltage fluctuation waveform of the power source system into an electrical current waveform; a pad for outputting the electric current waveform outside the LSI; and a wiring, arranged in the LSI, for connecting the power-source-system waveform converting circuit and the pad. The apparatus is used to measure a voltage fluctuation waveform near a particular circuit in operation included in, for example, a CMOS LSI.